

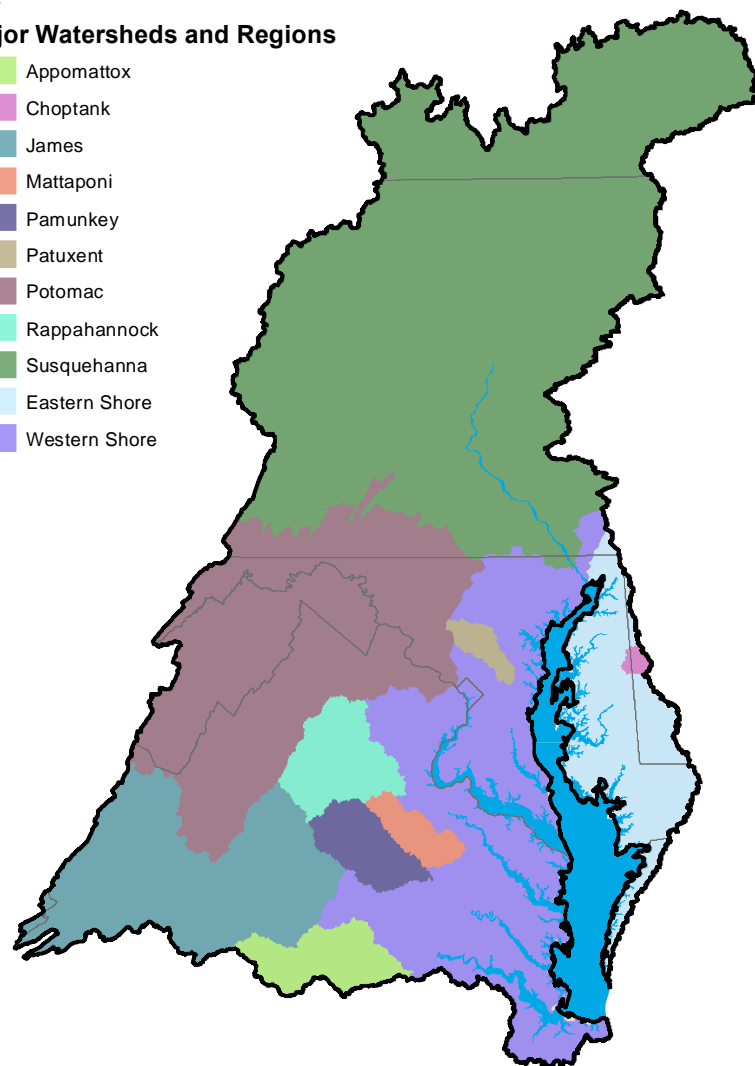
Regional SPARROW targeting- A different way of looking at loads

Joel Blomquist USGS
Baltimore, MD

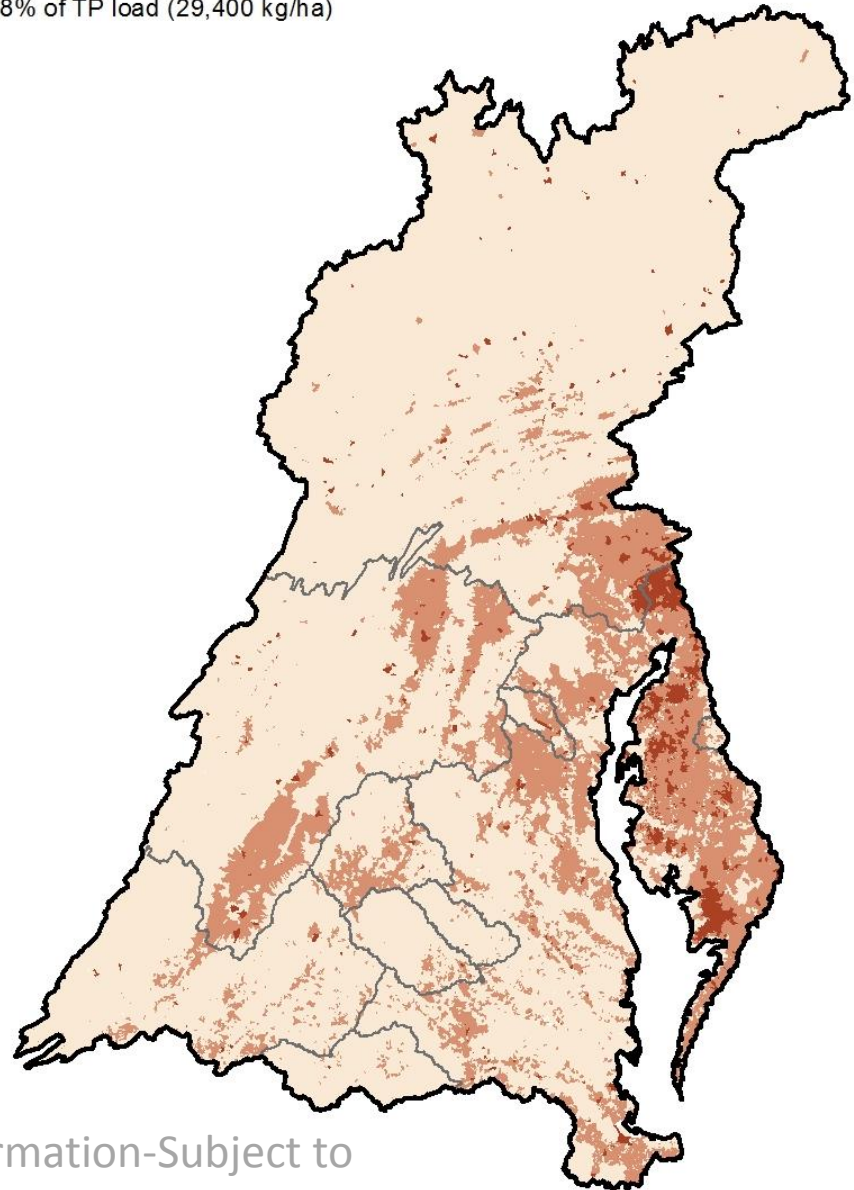
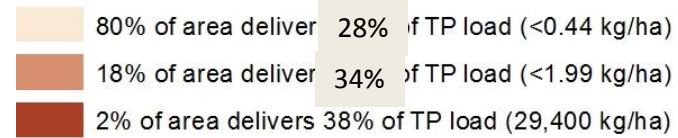
This information is preliminary and is subject to revision. It is being provided to meet the need for timely best science. The information is provided on the condition that neither the U.S. Geological Survey nor the U.S. Government shall be held liable for any damages resulting from the authorized or unauthorized use of the information."

Major Watersheds and Regions

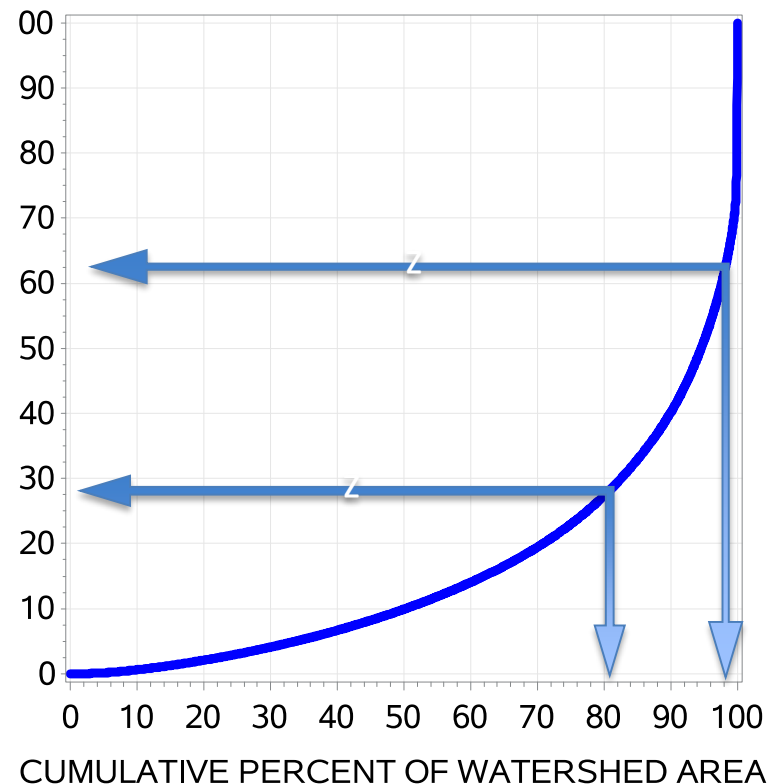
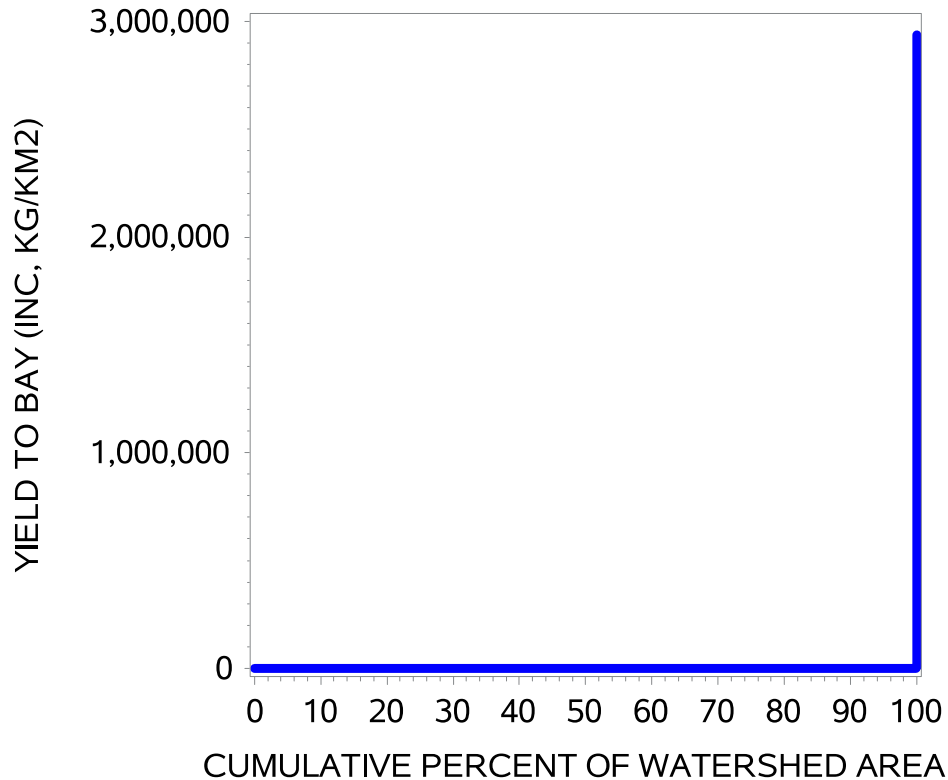
- Appomattox
- Choptank
- James
- Mattaponi
- Pamunkey
- Patuxent
- Potomac
- Rappahannock
- Susquehanna
- Eastern Shore
- Western Shore



Phosphorus delivered yield (kg/ha)

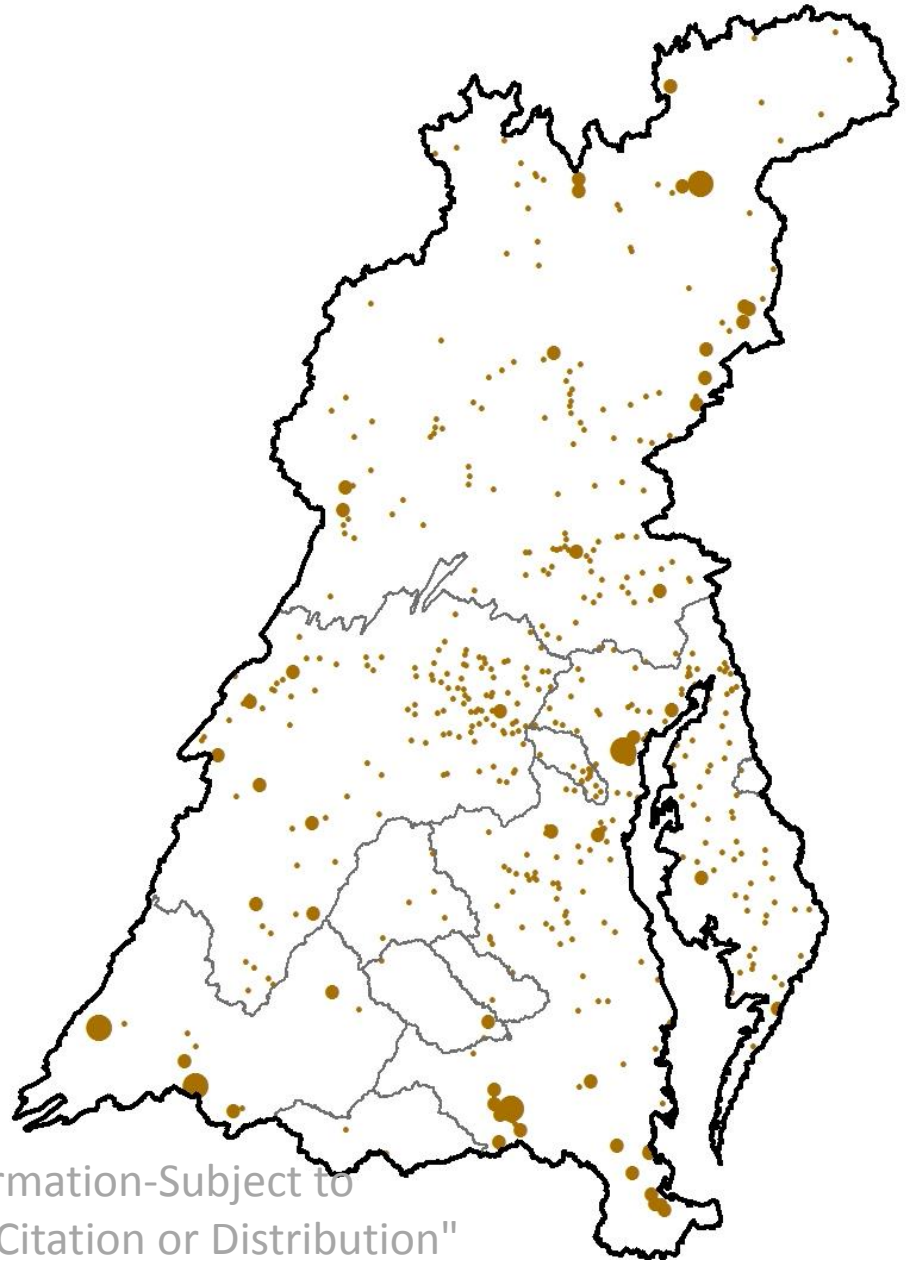


Phosphorus Total Delivered

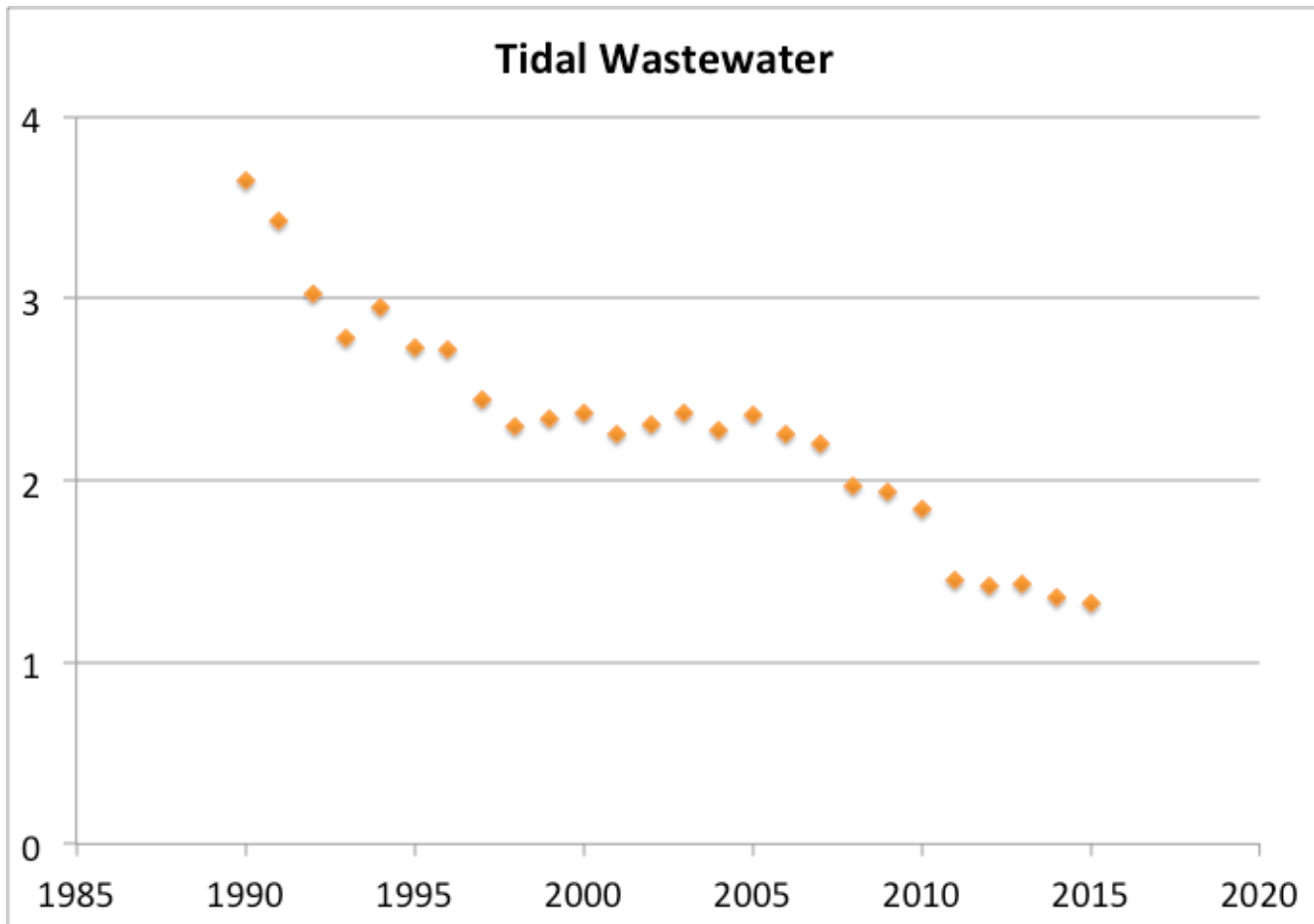


Phosphorus point source delivered (kg/year)

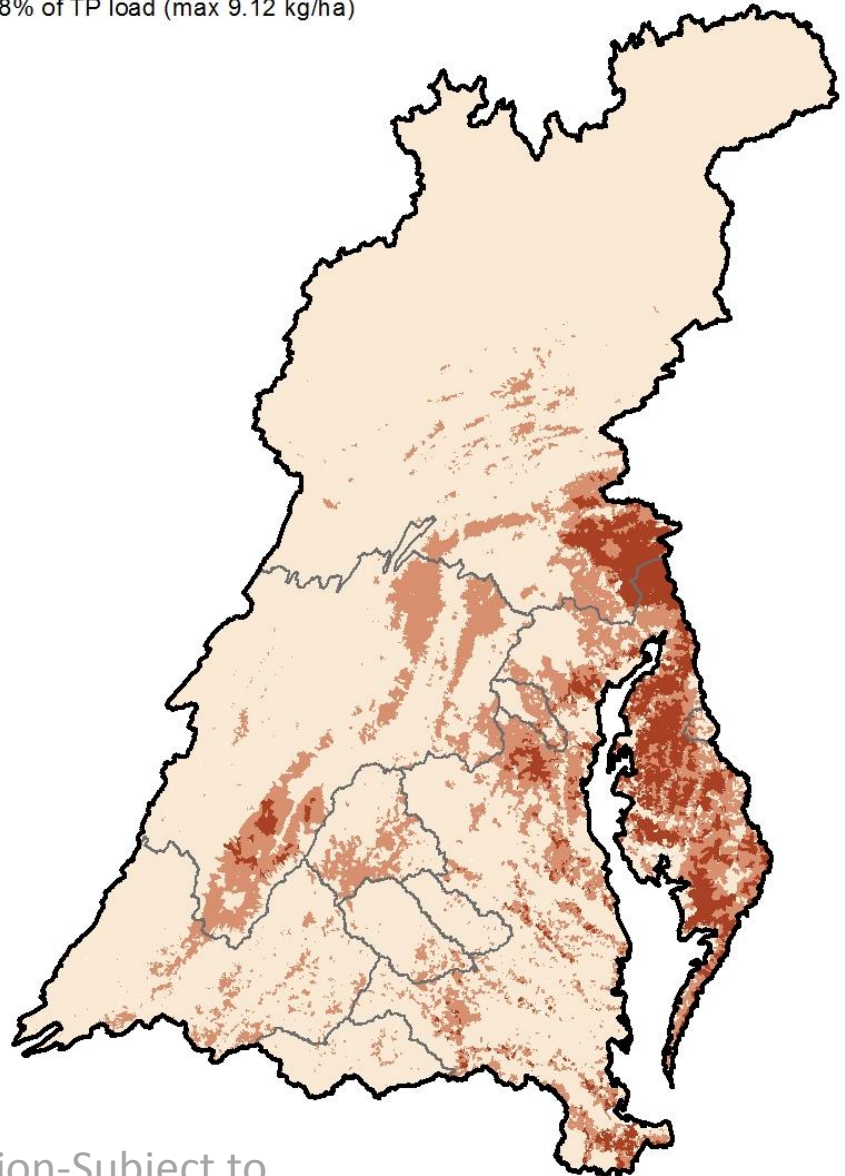
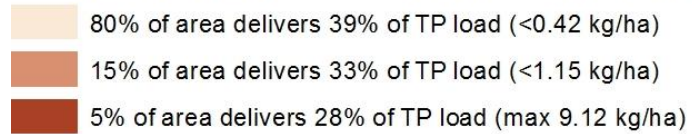
- <12,000
- 12,001 - 65,000
- >65,000



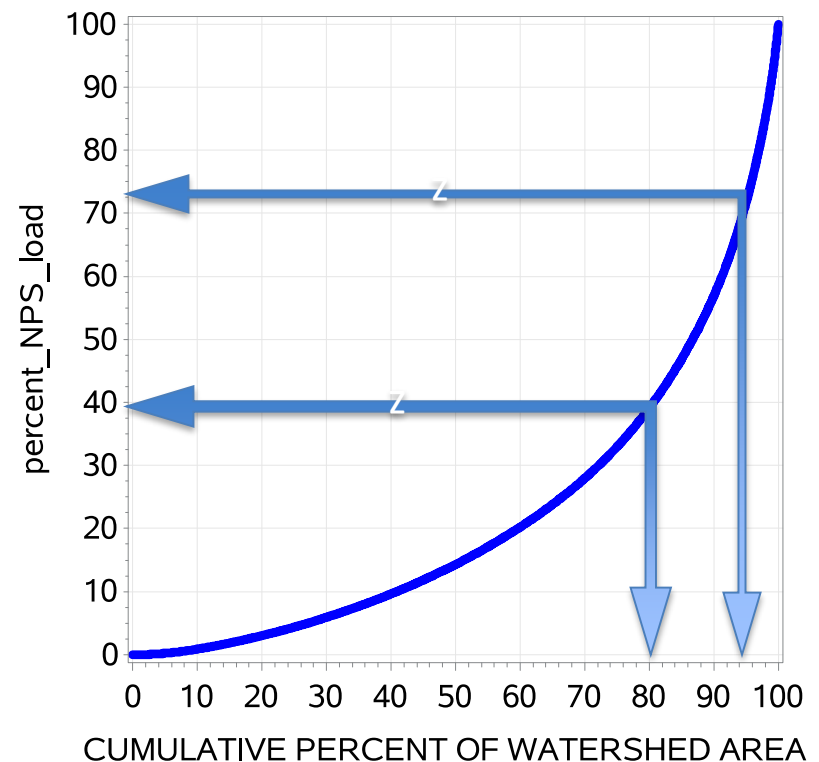
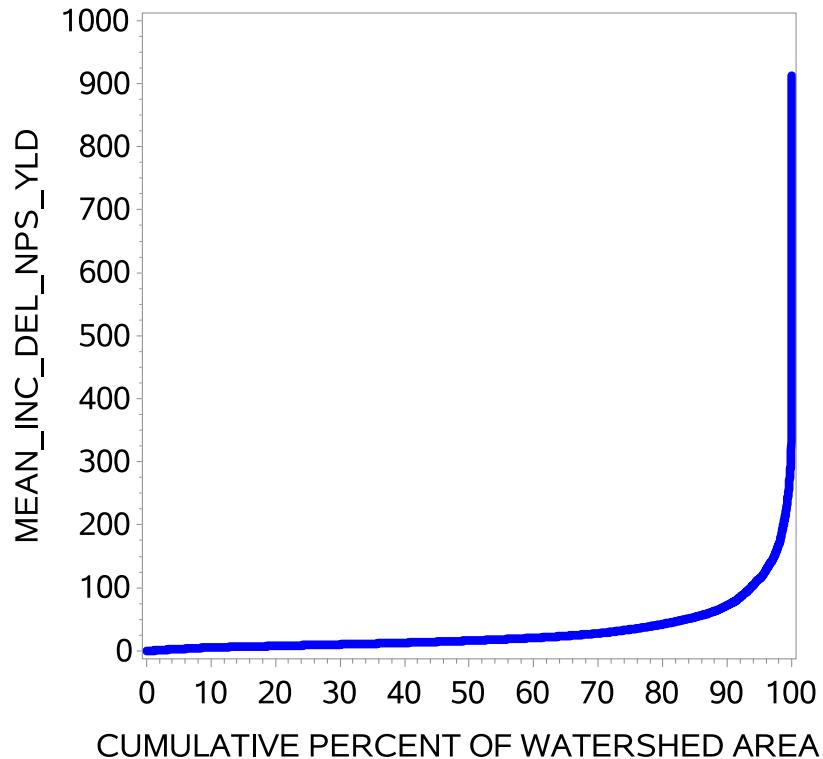
Phosphorus Wastewater in Million pounds



Phosphorus non-point source delivered yield (kg/ha)

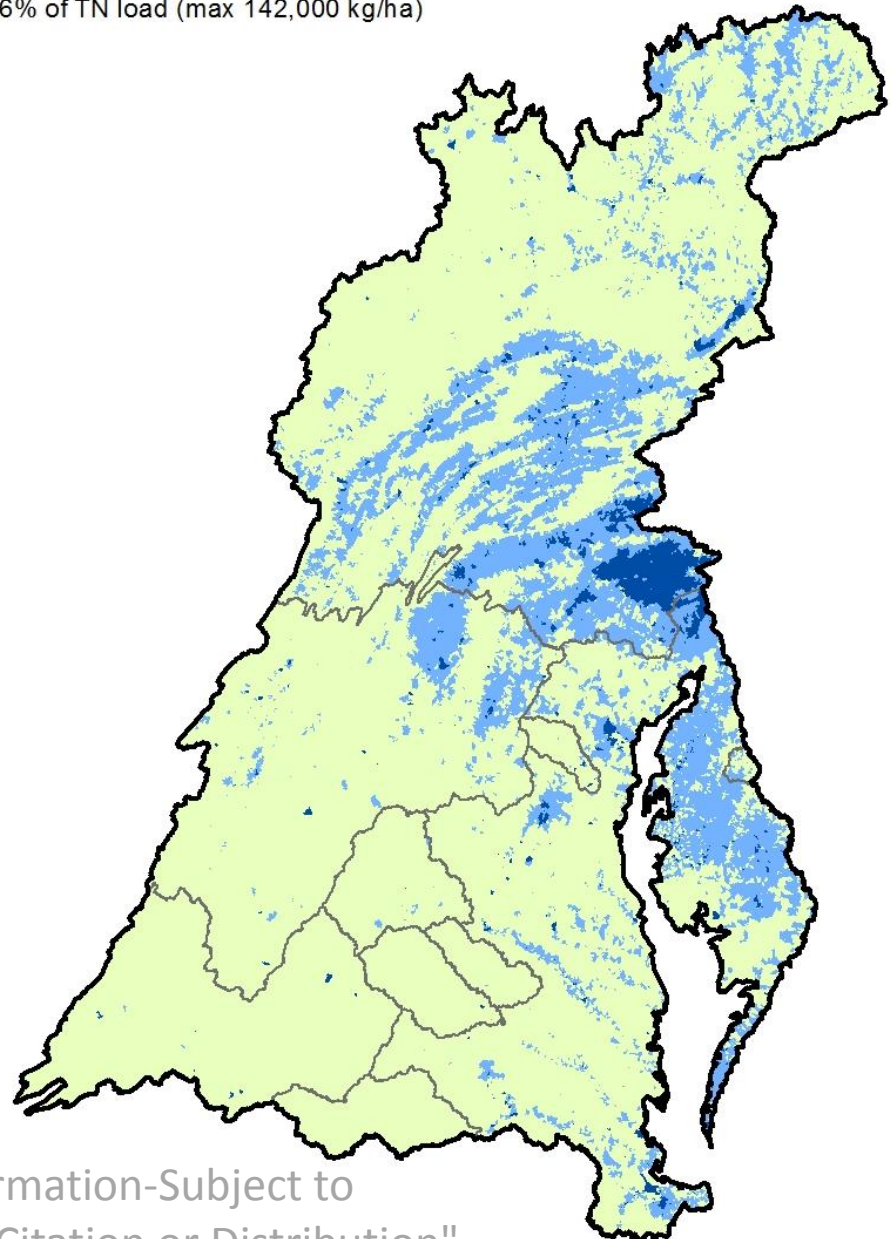


Phosphorus, Nonpoint Incremental Delivered



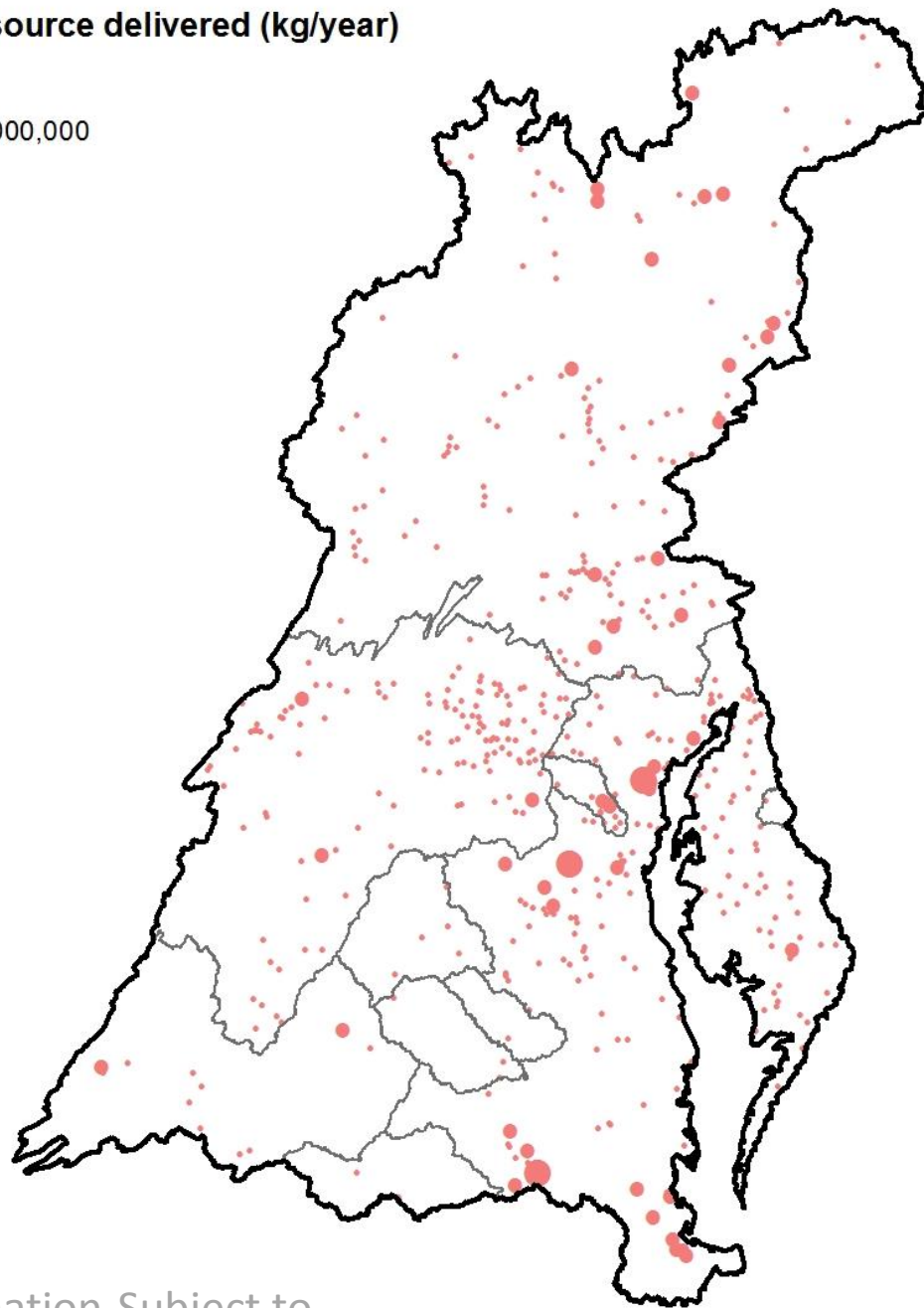
Nitrogen delivered yield (kg/ha)

- 80% of area delivers 39% of TN load (<9.16 kg/ha)
- 18% of area delivers 35% of TN load (<27.8 kg/ha)
- 2% of area delivers 26% of TN load (max 142,000 kg/ha)

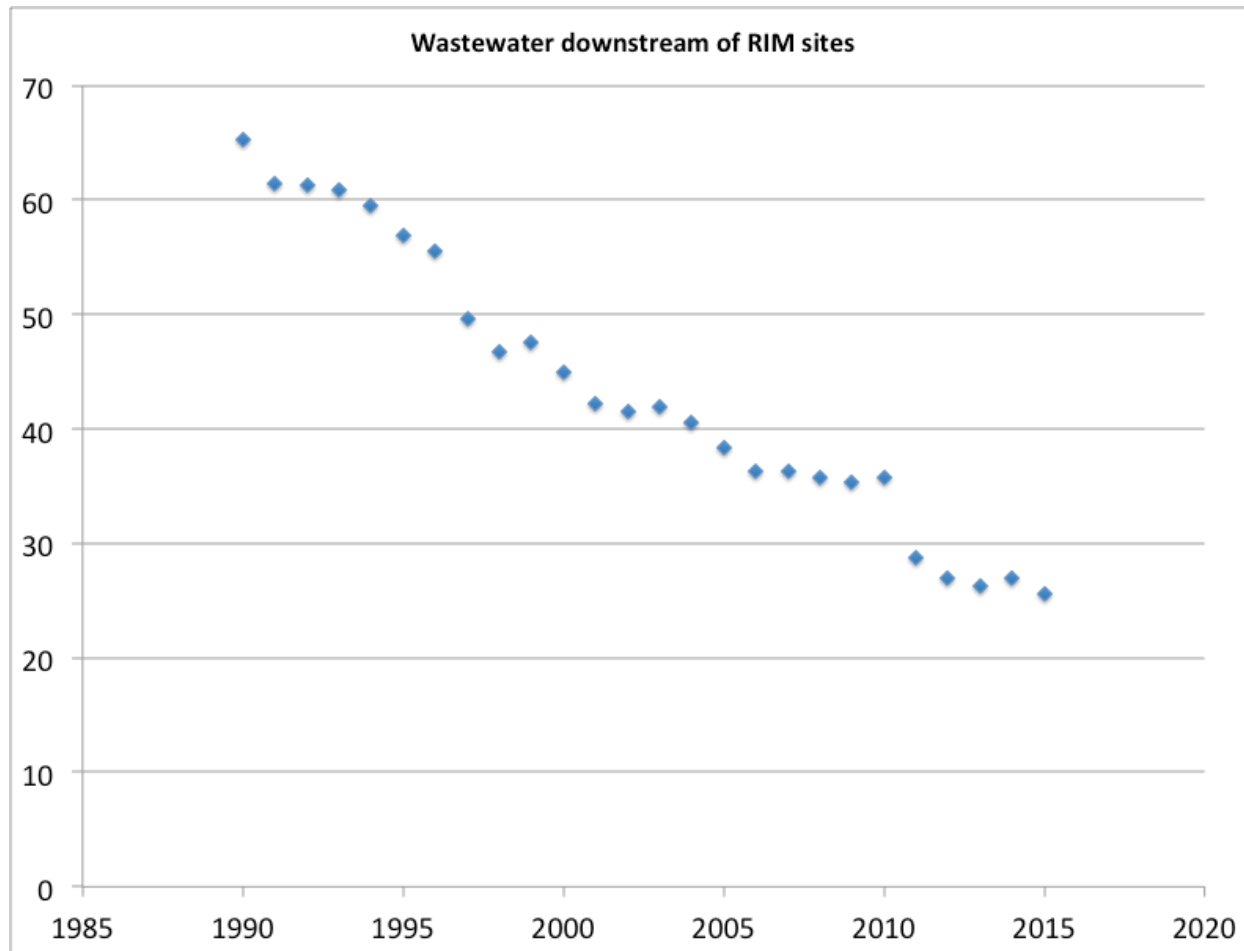


Nitrogen point source delivered (kg/year)

- <100,000
- 100,001 - 1,000,000
- >1,000,000



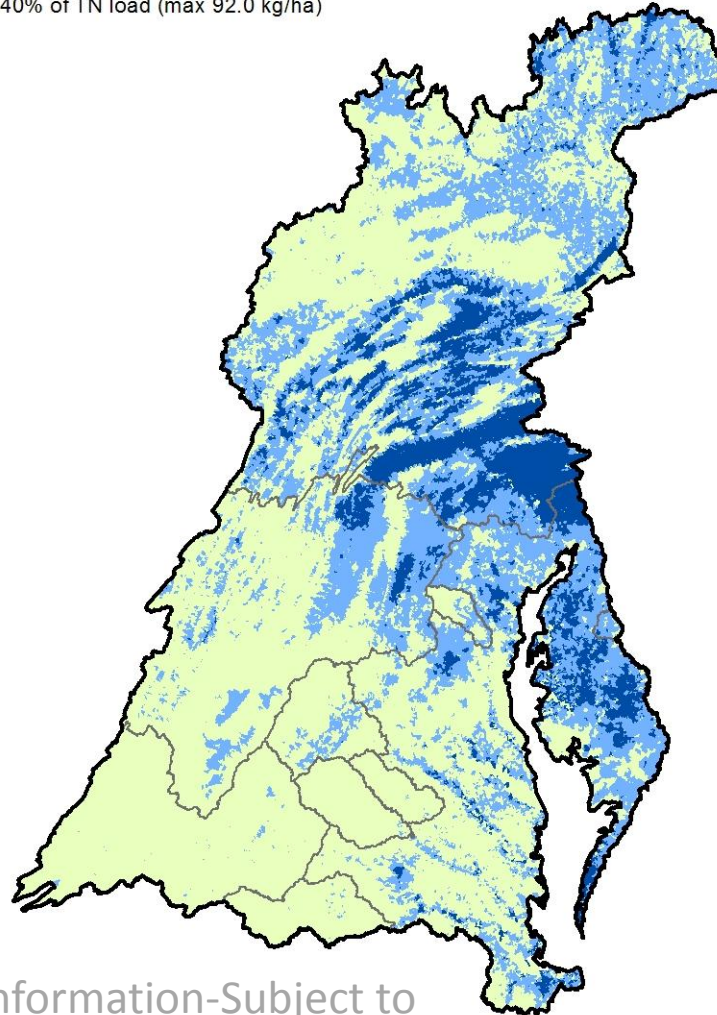
Nitrogen Wastewater, In Million Pounds



Explanation

Nitrogen non-point source delivered yield (kg/ha)

- 60% of area delivers 24% of TN load (<5.11 kg/ha)
- 30% of area delivers 36% of TN load (<13.3 kg/ha)
- 10% of area delivers 40% of TN load (max 92.0 kg/ha)



Summary

- SPARROW can be used to guide restoration in order to focus energy where a greater return on investment.
- Spatial analysis can be fine tuned to areas of interest such as State, Region, or Watershed.
- Supplemental information may be needed for VERY local focusing, as portions of the models are based on downscaled regional information.